

REMARKS

Claims 42, 45 and 57 are amended. Claims 42-79 are pending in the application. Reconsideration of the application in view of the amendments and the remarks to follow is requested.

Claims 58-62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form. Claims 75-79 are allowed.

Claims 42-56 and 63-74 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over U.S. Patent Nos. 6,214,641 and 5,817,535, both to Akram (and commonly owned by the assignee of this application), in view of various combinations of art. A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) is enclosed to overcome the obviousness-type double patenting rejections, and therefore, the rejections should be withdrawn.

Moreover, no other rejections are presented against claims 63-74, and therefore, such claims are allowable.

Claims 42 and 43 stand rejected under 35 U.S.C. §102(e) as being unpatentable over Chan et al. (5,998,860). Claim 44 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. and further in view of Chen et al. (6,215,180). Claims 45, 49-51, 53, 55 and 56 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. in view of Chen et al. Claims 46 and 47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. in view of Chen et al. and further in view of Tummala et al.

(Microelectronics Packaging Handbook). Claim 48 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. in view of Chen et al. and further in view of Tummala et al. Claims 52 and 54 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chan et al. in view of Chen et al. and further in view of Wang et al. (6,225,140). Claim 57 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Nakashima et al. (5,661,086) in view of Chen et al.

Regarding the anticipation rejection against claim 42, such claim is amended to recite forming a thermally conductive material over at least a portion of a die, the material comprising a thermal conductivity greater than that of elemental copper. Such amendment language is supported by the originally-filed application by an exemplary embodiment of the invention discussed at page 9. Chan teaches providing a potting material 90 over a silicon chip 50 wherein examples of the potting material 90 are listed as: resin, epoxies, polyesters, polyamides, cyanoacrylates ceramic, silicone, and urethane. In no fair or reasonable interpretation does such listing of materials teach or suggest a material comprising a thermal conductivity greater than that of elemental copper as recited in claim 42. Moreover, no combination of the art of record teaches or suggests such recited limitation of claim 42. Accordingly, Chan, in any combination with the art of record, fails to teach or suggest a positively recited limitation of claim 42, and therefore, claim 42 is allowable.

Claims 43-44 depend from independent claim 42, and therefore, are allowable for the reasons discussed above with respect to the independent claim,

as well as for their own recited features which are not shown or taught by the art of record.

Regarding the obviousness rejection against claim 45 based on the combination of Chan and Chen, claim 45 recites a metal foil comprising a thickness of less than or equal to about 500 microns. Such amendment language is supported by the originally-filed application by an exemplary embodiment of the invention discussed at page 9. The Examiner correctly states Chan fails to teach a metal foil and relies on Chen to supply the deficiency in teachings of Chan (pg. 4 of paper no. 13). Chen teaches a first heat dissipating member 54 and a second heat dissipating member 59, but does not provide any teachings to physical dimensions of the first and second heat dissipating members 54 and 59. Accordingly, it is inconceivable that the combination of Chan and Chen teach or suggest a metal foil comprising a thickness of less than or equal to about **500 microns** as recited in claim 45. The combination of art fails to teach or suggest a positively recited limitation of claim 45, and therefore, claim 45 is allowable.

Claims 46-56 depend from independent claim 45, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

For example, claim 52 stands rejected based on the combination of Chan, Chen and Wang. Such claim recites a [metal] foil physically contacting a predominate portion of a sidewall length [of the semiconductive-material-comprising

die]. The Examiner correctly states Chan and Chen do not teach a heat dissipating member physically contacting a sidewall and relies on Wang to allegedly supply the deficiency in teachings. However, Wang teaches a heat slug 312 spaced from a die 311 with adhesive epoxy 314 filling the space (col. 3, lines 1-10; Figs. 3-4). That is, the heat slug of Wang does not physically contact the die. Accordingly, it is inconceivable that Wang, in combination with the art of record, could teach or suggest a [metal] foil **physically contacting** a predominate portion of a sidewall length [of the semiconductive-material-comprising die] as recited in claim 52. The combination of art fails to teach or suggest a positively recited limitation of claim 52, and therefore, claim 52 is allowable.

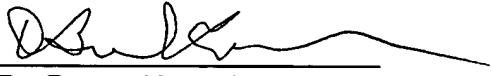
Regarding the obviousness rejection against claim 57, such claim is amended to recite a semiconductive-material-comprising die ... comprising sidewalls extending from an insulative substrate, the metal foil physically contacting at least one sidewall. Such amendment language is supported by the originally-filed application by an exemplary embodiment of the invention disclosed at page 30. The art of record fails to teach or suggest a metal foil **physically contacting** a sidewall of a die. Consequently, the art of record fails to teach or suggest a positively recited limitation of claim 57, and therefore, claim 57 is allowable.

Claims 58-62 depend from independent claim 57, and therefore, are allowable for the reasons discussed above with respect to the independent claim, as well as for their own recited features which are not shown or taught by the art of record.

This application is now believed to be in immediate condition for allowance, and action to that end is respectfully requested. If the Examiner's next anticipated action is to be anything other than a Notice of Allowance, the undersigned respectfully requests a telephone interview prior to issuance of any such subsequent action.

Respectfully submitted,

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By: 
D. Brent Kenady
Reg. No. 40,045